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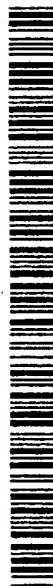
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(54) Title: FLUOROCARBON REFRIGERANT COMPOSITIONS

(57) Abstract: The invention provides fluorocarbon refrigerant compositions that offer alternatives, and are considered environmentally safe substitutes, for CFC's and HCFC's. The compositions of the invention are useful as refrigerants, including for use in chillers, aerosol propellants, metered dose inhalers, heat transfer media, gaseous dielectrics, fire extinguishing agents, foam blowing agents, solvents and sterilants. The compositions of the invention are soluble in lubricating oils and are, therefore, particularly useful as R-22 retrofit fluids.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/30276

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09K5/04 C09K3/30 C08J9/14 C23G5/028

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09K C08J C23G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 659 862 A (SANYO ELECTRIC CO) 28 June 1995 (1995-06-28) the whole document	1-3,9, 12,14-17
X	EP 0 779 352 A (AUSIMONT SPA) 18 June 1997 (1997-06-18) the whole document	1,2,10, 11, 14-17,28
X	WO 96 03473 A (MURPHY FREDERICK THOMAS ; CORR STUART (GB); ICI PLC (GB); MORRISON) 8 February 1996 (1996-02-08) the whole document	1-6,9, 12,14-17
X	US 5 688 432 A (PEARSON STEPHEN FORBES) 18 November 1997 (1997-11-18) the whole document	1,2,11, 14-17,28
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	DE 42 26 431 A (PRIVATE INST FUER LUFT UND KA) 17 February 1994 (1994-02-17) the whole document	1,2, 13-17
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X	WO 97 15637 A (HAN LIZHONG ;UNIV TSINGHUA (CN); ZHAO XIAOYU (CN); YE MAO (CN); ZH) 1 May 1997 (1997-05-01) abstract	1,2, 14-17
P,X	WO 00 56834 A (DU PONT) 28 September 2000 (2000-09-28) the whole document	1-3, 7-12, 14-17, 20,22

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

Continuation of Box I.2

Present claims 1-28 relate to an extremely large number of possible compositions of a refrigerant (i) and a solubilizing agent (ii) and processes using said compositions. Support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compositions and processes claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compositions prepared in the examples 1,2,4-7 wherein the refrigerant (i) is a mixture of R-32, R-125 and R-134a and a reasonable generalisation thereof.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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